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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,509	03/02/2004	Roy Peterson	PHUS030058	2778

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EXAMINER

CATTUNGAL, SANJAY

ART UNIT	PAPER NUMBER
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3768

MAIL DATE	DELIVERY MODE
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06/20/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/791,509	PETERSON ET AL.	
	Examiner	Art Unit	
	Sanjay Cattungal	3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>03/02/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claim 1-3, 10-13, and 19-24, is rejected under 35 U.S.C. 102(e) as being anticipated by U. S. Patent No. 6,890,419 to Smith et al.**
3. Regarding **Claims 1, 3, 10-13, and 19-24**, Smith teaches an ultrasonic diagnostic imaging system probe comprising: an ultrasonic transducer array (Col. 11 lines 3-8) which produces beam formed signals (Col. 11 lines 9-17 and Col. 12 lines 15-27); an integrated circuit (Fig. 11) coupled to the ultrasonic transducer array which acts to process or control transducer array signals (Abstract and Fig. 11); a display panel (Fig. 2 element 28); a source of a.c. power (Col. 17 lines 50-55); and a fuel cell coupled to the integrated circuit for energizing the integrated circuit; and a source of fuel coupled to the fuel cell. (Col. 18 lines 29-33)
4. Regarding **Claim 2**, Smith teaches a transceiver, coupled to the integrated circuit, which acts to communicate between the probe and an ultrasound system. (Fig. 11)

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 4-9, and 14-18, are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent No. 6,890,419 to Smith et al. in view of U. S. Patent No. 7,005,206 to Lawrence et al.**

Regarding **Claims 4 and 14**, Smith teaches all of the above claimed limitations but does not expressly teach a power converter, coupled to the fuel cell, which produces a stepped up voltage level in response to the power level produced by the fuel cell.

Lawrence teaches use of a voltage boost converter circuit. (Fig. 13 a-2)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Smith with a voltage boost converter as taught by Lawrence since a boost converter is primarily responsible for boosting the fuel cell voltage to a higher voltage level and for supplying charge to capacitive and battery storage devices within the circuit. (Col. 15 lines 33-36)

7. Regarding **Claims 5 and 15**, Lawrence teaches a capacitor, coupled to the output of the fuel cell, which acts to store energy for peak load conditions. (Col. 18 lines 34-43)

8. Regarding **Claims 6, 7, and 16**, Lawrence teaches that the source of fuel comprises a replaceable fuel cartridge or ampule, wherein the fuel cartridge or ampule contains a methanol- or alcohol-based fuel. (Abstract and Claim 1)

9. Regarding **Claims 8, 9, 17, and 18**, Lawrence teaches that the fuel cell further comprises an anode, a cathode, and an ion exchange membrane located between the anode and the cathode. (Abstract)

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanjay Cattungal whose telephone number is (571)272-1306. The examiner can normally be reached on 9:30 - 5:00 pm.


11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eleni Mantis-Mercader can be reached on (571)272-4740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SPC


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